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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/568,081	02/13/2006	Zhong Chao Yin	2577-160	6297

6449	7590	07/12/2007
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EXAMINER	
ZHENG, LI	

ART UNIT	PAPER NUMBER
1638	

NOTIFICATION DATE	DELIVERY MODE
07/12/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No. 10/568,081	Applicant(s) YIN ET AL.	
	Examiner Li Zheng	Art Unit 1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION. /

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 April 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8, 11-13, 19-21 and 24-36 is/are pending in the application.
 4a) Of the above claim(s) 2, 4, 6-8, 19-21, 24 and 31-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5, 11-13, 25-30, 35 and 36 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's cancellation of claims 22-23, amendments to claims 1, 3, 7, 12, and 29, submission of new claims 35-36, as well as amendments to the specification filed on 04/27/2007 are acknowledged. The examiner also confirms that SEQ ID NO: 12-14 are currently elected and examined.

As a result, claims 1-8, 11-13, 19-21, and 24-36 are pending.

Claims 2, 4; 6-8, 19-21, 24, and 31-34 are withdrawn from consideration.

Claims 1, 3, 5, 11-13, 25-30, and 35-36 are examined on the merits.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. All the rejections to claim 22-23 are withdrawn due to the cancellation of the claim.

4. The rejection of claims 1,3, 5, 11-13, 22, 26-27, and 29-30 under 35 U.S.C. 102(b) are withdrawn due to claim amendment.

Specification

5. The specification is objected to because of the recitations, "tatrane" and "0,0015M". See, for example, paragraph 92.

Claim Objections

6. Claims 1 and 3 are objected because of the recitations, "tatrane" and "0,0015M".

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 3, 26 and 36 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 3, the recitation, "to said isolated nucleic acid of (I)....when transfected into the plant", in part (v), render the claim indefinite. It is unclear what the recitation intends to limit. The metes and bounds are not clear.

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8. Claims 1, 3, 5, 11-13, and 25-30 remain and 35-36 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, for the reasons of record stated in the Office action mailed February 7, 2007. Applicants traverse in the paper filed April 27, 2007. Applicants' arguments have been fully considered but were not found persuasive.

Applicants argue that the specification fully describes a nucleotide sequence that encodes the polypeptide of SEQ ID NO: 5 by providing the amino acid sequence for the polypeptide (response, page 12, the 2nd paragraph). However, as stated in previous office action, the specification does not correlate the function of *Xanthomonas* resistance with any nucleotide sequences other than the SEQ ID NO: 1. Although SEQ ID NO: 1 encodes SEQ ID NO: 5, the specification fails to correlate the antimicrobial activity to SEQ ID NO: 5 because the specification fails to describe what structure of SEQ ID NO: 1 contribute to the activity. The only correlation between structure and function is SEQ ID NO: 1.

Furthermore, the specification does not indicate that reverse complement DNA strand of SEQ ID No. 1-4 also has antimicrobial activity. A nucleotide sequence hybridizable to SEQ ID No. 1-4 is expected to be reverse complement to DNA strand of SEQ ID No.1-4, and therefore is unlikely to have antimicrobial activity.

9. Claims 1, 3, 5, 11-13, and 25-30 remain and 35-36 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for nucleotide sequences or vector comprising the nucleotide sequence of SEQ ID NO: 1, does not reasonably provide enablement for SEQ ID NO: 2-4, any sequences encoding SEQ ID NO: 5, nucleotide sequences of greater than 50 bps which hybridize under stringent condition and are at least 90% or 95% to nucleotide sequences encoding SEQ ID NO: 5 and provide a plant resistance to *Xanthomonas*. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make/use the invention commensurate in scope with these claims, for the reasons of record stated in the Office action mailed February 7, 2007. Applicants traverse in the paper filed April 27, 2007. Applicants' arguments have been fully considered but were not found persuasive.

Applicants argue that although coding region of Xa31 are identical between the resistant and susceptible alleles, the resistance or susceptibility is relative to various Xoo strain(response, page 12, the 2nd paragraph). However, the specification only provides guidance on using resistance allele of SEQ ID NO: 1 to provide rice resistance to PXO99. The specification does not provide any guidance on using susceptible alleles to confer rice resistance to an unidentified Xoo strain.

Applicants further argue that although the specification in paragraph 84 suggests that maybe there is no difference in expression pattern, the remainder of the specification clearly demonstrates that the coding region imparts resistance to

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Xanthomonas in transgenic plant (response, page 14, the 1st paragraph). The office disagree with Applicants' conclusion. The specification failed to provide guidance on why the resistant allele can provide resistance to Xoo strain, while the susceptible allele cannot. On the contrary, the specification admits that the putative coding region is identical between two alleles, and that the expression pattern is similar. The specification also does not provide evidence at time of invention that the protein of SEQ ID NO: 5 is responsible for the resistance.

Applicants argue that the resistance specificity of the two alleles is determined by the promoters of the two alleles and avirulence protein from the pathogen and the teaching of Gu et al confirms the prediction (response, page 14, the 2nd paragraph). However, the specification does not provide any guidance regarding such assertion. On the contrary, the specification teaches that there is little difference in expression pattern even when assayed upon the challenge of the pathogen. Therefore, contrary to Applicants' conclusion, the office concludes that Gu et al. teach away from the specification in this regard.

Summary

No claim is allowed.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Li Zheng whose telephone number is 571-272-8031. The examiner can normally be reached on Monday through Friday 9:00 AM - 5:30 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ELIZABETH MCELWAIN
PRIMARY EXAMINER